

Abstract of the Disclosure

Voice utterances are substituted for manipulation of a pointing device, the pointing device being of the kind which is manipulated to control motion of a cursor on a computer display and to indicate desired actions associated with the position of the cursor on the display, the cursor being moved and the desired actions being aided by an operating system in the computer in response to control signals received from the pointing device, the computer also having an alphanumeric keyboard, the operating system being separately responsive to control signals received from the keyboard in accordance with a predetermined format specific to the keyboard; in the system, a voice recognizer recognizes the voiced utterance, and an interpreter converts the voiced utterance into control signals which will directly create a desired action aided by the operating system without first being converted into control signals expressed in the predetermined format specific to the keyboard. In another aspect, voiced utterances are converted to commands, expressed in a predefined command language, to be used by an operating system of a computer, by converting some voiced utterances into commands corresponding to actions to be taken by the operating system, and converting other voiced utterances into commands which carry associated text strings to be used as part of text being processed in an application program running under the operating system. In another aspect, a table is generated for aiding the conversion of voiced utterances to commands for use in controlling an operating system of a computer to achieve desired actions in an application program running under the operating system, the application program including menus and control buttons; the instruction sequence of the application program is parsed to identify menu entries and control buttons, and an entry is included in the table for each menu entry and control button found in the application program, each entry in the table containing a command corresponding to the menu entry or control button. In another aspect, a user is enabled to create an instance in a formal language of the kind which has a strictly defined syntax; a graphically displayed list of entries are expressed in

a natural language which does not comply with the syntax, the user is permitted to point to an entry on the list, and the instance corresponding to the identified entry in the list is automatically generated in response to the pointing.